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EXAMINER	
BROOME, SAID A	

ART UNIT	PAPER NUMBER
2628	

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/512,056	ITO ET AL.	
	Examiner	Art Unit	
	Said Broome	2628	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 April 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 17 and 18 are objected to under 37 CFR 1.75(c) as being in improper form because they depend from multiple dependent claim 14. See MPEP § 608.01(n). Accordingly, the claims 17 and 18 have not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention because the claim recites a multimedia information generation method according to claim 1, though it depends from a multimedia information generation apparatus of claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Osaka et al. (US Patent 6,023,277).

Regarding claim 1, Osaka et al. teaches a multimedia information generation apparatus for generating information including at least one two-dimensional image and one three-dimensional image in column 38 lines 10-11 ("...an image generator 1015a reproduces a three-dimensional image.") and in column 14 lines 16-24 ("FIG. 8 is a block diagram showing the configuration of a computer system...In this embodiment, a two-dimensional image and a three-dimensional (stereoscopic) image are switched between in all or part of a display screen when an image display is presented..."), where it is described that both two-dimensional and three-dimensional image data are generated by a computer system for display. Osaka et al. also teaches a control information generation unit that generates control information for controlling display of said three-dimensional image in column 1 lines 9-12 ("...a display control apparatus and method for controlling a stereoscopic display device which allows a user to observe a stereoscopic image..."). Osaka et al. also teaches a multimedia information generation unit generating said multimedia information including said at least one two-dimensional image or character information and at least one three-dimensional image and said control information in column 14 lines 47-53 ("The display driver 6 comprises elements 7, 8, 9 and 10...An image painting unit 7 controls the painting of data actually painted on the stereoscopic display, namely a two-dimensional image handled heretofore and a three-dimensional image...") and lines 57-63 ("A screen controller 9 generates paint signals and distributes these signals to the image paint unit 7...A host computer 11 is capable of handling two-dimensional images and three-dimensional images."), where it is described that the display driver 6 comprises a paint unit 7 that generates the two and three dimensional images and also a screen controller that controls the display of the three dimensional images, as described in column 17 lines 41-47 ("...the screen

controller 9 notifies the image painting unit 7 of the stereoscopic image data to be displayed, its display position and size..."). Osaka et al. also teaches that at least one two-dimensional image or character information and at least one three-dimensional image are data to be synthesized in column 13 lines 50-52 ("...a method of presenting a mixed display of a three-dimensional image and a two-dimensional image...").

Regarding claim 2, Osaka et al. teaches a multimedia information generation apparatus, as illustrated in Figure 8, for generating multimedia information comprised of a plurality of modules, as illustrated in Figure 8 as 1-12. Osaka et al. also teaches a module including two-dimensional and three-dimensional images in column 14 lines 61-63 ("A host computer 11 is capable of handling two-dimensional images and three-dimensional images.") where it is described that the computer processes the image information, and transmits the information to the object analyzer, as illustrated in Figure 8. Osaka et al. also teaches a module for controlling the display of the three-dimensional image in column 17 lines 41-47 ("the screen controller 9 notifies the image painting unit 7 of the stereoscopic image data to be displayed...causing a stereoscopic image display to be presented in the above-mentioned window."). Osaka et al. also teaches that at least one two-dimensional image or character information and at least one three-dimensional image are data to be synthesized in column 13 lines 50-52 ("...a method of presenting a mixed display of a three-dimensional image and a two-dimensional image...").

Regarding claim 3, Osaka et al. teaches that control information is provided correspondingly to each three-dimensional image in column 17 lines 41-47 ("the screen controller 9 notifies the image painting unit 7 of the stereoscopic image data to be

displayed...causing a stereoscopic image display to be presented in the above-mentioned window.").

Regarding claim 4, Osaka et al. teaches that the control information is provided correspondingly to a plurality of three-dimensional images in column 17 lines 41-47 ("the screen controller 9 notifies the image painting unit 7 of the stereoscopic image data to be displayed...causing a stereoscopic image display to be presented in the above-mentioned window.").

Regarding claim 5, Osaka et al. teaches an identifier for identifying each of at least said two-dimensional image and said three-dimensional image is set in advance in column 16 lines 11-21 ("A three-dimensional image file 50 according to this embodiment includes a file header 51...In general, file name, file creation date, file capacity, image format and image compression means are described in the file header. The application analyzes the header, reads in the image data and causes the computer to paint the image."), where it is described that the file header identifies that images or prior to generation of the stereoscopic images, as described in column 20 lines 61-63 ("Here the three-dimensional image data is read out of the three-dimensional image file 50 corresponding to this window, this image data is displayed in the window"). Osaka et al. also teaches that the control information includes the identifier of the three-dimensional image in column 38 5-11 lines ("Here it is determined, based upon the information in the file header 51, whether this window has three-dimensional image data. If it is determined at step S64 that this window has a three-dimensional image file, then the program proceeds to step S165. Here the display driver 1015 is controlled to present the three-dimensional display."), where it is

described that the information used to control the display of the three-dimensional image is based on the identifier designating that the image is three-dimensional.

Regarding claim 6, Osaka et al. teaches an identifier for identifying each of at least said two-dimensional image and said three-dimensional image is set in advance in column 16 lines 11-21 ("A three-dimensional image file 50 according to this embodiment includes a file header 51...In general, file name, file creation date, file capacity, image format and image compression means are described in the file header. The application analyzes the header, reads in the image data and causes the computer to paint the image."), where it is described that the file header identifies that images or prior to generation of the stereoscopic images, as described in column 20 lines 61-63 ("Here the three-dimensional image data is read out of the three-dimensional image file 50 corresponding to this window, this image data is displayed in the window"). Osaka et al. also teaches that the control information includes the identifier of the three-dimensional image in column 38 5-11 lines ("Here it is determined, based upon the information in the file header 51, whether this window has three-dimensional image data. If it is determined at step S64 that this window has a three-dimensional image file, then the program proceeds to step S165. Here the display driver 1015 is controlled to present the three-dimensional display."), where it is described that the information used to control the display of the three-dimensional image is based on the identifier designating that the image is three-dimensional.

Regarding claim 7, Osaka et al. teaches that the control information includes a plurality of identifiers in column 16 lines 11-21 ("A three-dimensional image file 50 according to this embodiment includes a file header 51...In general, file name, file creation date, file capacity, image format and image compression means are described in the file header.") and 39-44

("Further, in order to clarify the file of the image having three-dimensional image data, the file name may be provided with an extension.").

Regarding claim 8, Osaka et al. teaches a predetermined value that indicates that the images are three-dimensional images in column 16 lines 19-21 ("The application analyzes the header, reads in the image data...") and in column 17 lines 23-26 ("Here it is determined, based upon the information in the file header 51, whether this window has three-dimensional image data."), where it is described that the file header contains a pre-designated file extension that indicates whether the image is three-dimensional.

Regarding claim 9, Osaka et al. teaches a predetermined value that indicates that the images included in the modules are three-dimensional images in column 16 lines 19-21 ("The application analyzes the header, reads in the image data...") and in column 17 lines 23-26 ("Here it is determined, based upon the information in the file header 51, whether this window has three-dimensional image data."), where it is described that the images included in the memory module 11b, as described in column 15 lines 48-61 ("Initialization processing includes memory acquisition in the computer system... Next, processing corresponding to the event acquired at step S41 is executed at step S42. For example, if a menu item "OPEN FILE" has been selected from the pull-down menu using the mouse, then the corresponding processing is executed."), include a file header that contains a pre-designated file extension that indicates whether the image is three-dimensional.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 10-16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osaka et al. in view of Iizuka et al. (US Patent 6,657,655) in further view of Akamatsu et al. (US Patent 6,313,866).

Regarding claim 10, Osaka et al. teaches a multimedia information reproduction apparatus reproducing multimedia information including at least one two-dimensional image or character information and at least one three-dimensional images in column 14 lines 16-24 ("FIG. 8 is a block diagram showing the configuration of a computer system...In this embodiment, a two-dimensional image and a three-dimensional (stereoscopic) image are switched between in all or part of a display screen when an image display is presented...") and in column 4 lines 44-50 ("...a display device capable of a two-dimensional display and a three-dimensional display..."). Osaka et al. fails to teach a generation unit generating a three-dimensional image from said two-dimensional image. Iizuka et al. teaches a generation unit that generates a three-dimensional image from a two-dimensional image in column 21 lines 51-53 ("The stereoscopic-image-data processing unit 306 combines a pair of left and right image data...") and lines 58-61 ("The display control unit 303 receives stereoscopic-image data formed by the stereoscopic-image-data processing unit 306...and displays the received data..."). Osaka et al. and Iizuka et al. fail to teach a first synthesis unit that synthesizes a three-dimensional image generated by a generation

unit and a three-dimensional image included in said multimedia information. Akamatsu et al. teaches a first synthesis unit that synthesizes a three-dimensional image generated by a generation unit and a three-dimensional image included in said multimedia information in column 5 lines 4-11 ("a first image signal is input to an input terminal 11, while a second image signal is input to a second input terminal 12... The output terminal of the parallax control circuit 103 is connected to the three-dimensional image synthesizer 103."), where it is described that the synthesis unit synthesizes two input three-dimensional images, therefore one of ordinary skill in the art would be capable of inputting the three-dimensional image generated by Iizuka et al. and the multimedia file containing the three-dimensional image data as taught Osaka et al. and synthesize the images. It would have been obvious to one of ordinary skill in the art to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. because this combination would provide an improved stereoscopic environment that enables display of both three-dimensional and two-dimensional image simultaneously.

Regarding claim 11, Osaka et al. fails to teach the limitations. Iizuka et al. teaches a second synthesis unit that synthesizes a plurality of two-dimensional images or character information in column 21 lines 51-53 ("The stereoscopic-image-data processing unit 306 combines a pair of left and right image data..."). Iizuka et al. also teaches that the generation unit generates three-dimensional image data from two-dimensional image data obtained through synthesis by said second synthesis unit in column 21 lines 58-61 ("The display control unit 303 receives stereoscopic-image data formed by the stereoscopic-image-data processing unit 306...and displays the received data..."), where it is described that the synthesis unit synthesizes the two-dimensional images and the control unit generates the three-dimensional data on a

display. The motivation to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. is equivalent to the motivation of claim 10.

Regarding claim 12, Osaka et al. teaches a multimedia information reproduction apparatus reproducing multimedia information including at least one two-dimensional image or character information and at least one three-dimensional images in column 14 lines 16-24 ("FIG. 8 is a block diagram showing the configuration of a computer system...In this embodiment, a two-dimensional image and a three-dimensional (stereoscopic) image are switched between in all or part of a display screen when an image display is presented...") and in column 4 lines 44-50 ("...a display device capable of a two-dimensional display and a three-dimensional display..."). Though Osaka et al. teaches generating image data that is page data or data capable of comprising tables and lines, as shown in Figures 34 and 45, Osaka et al. fails to teach decoding page data. Iizuka et al. teaches decoding multimedia information, or image files, to obtain image data in column 21 lines 40-43 ("The image-file processing unit 304 reads various types of image files, analyzes the contents of the read file, decodes compressed data if necessary, and converts the data into image data having a predetermined standard format."), where it described that the image data representing the two-dimensional left and right images is decoded, therefore it would have been obvious to one of ordinary skill in the art to decode any image data including 2D image data presented in a 2D window, as shown by Osaka et al. in Figures 34 and 45. Iizuka et al. also teaches a 2D/3D conversion unit converting said page image into a three-dimensional image in column 21 lines 51-61 ("The stereoscopic-image-data processing unit 306 combines a pair of left and right image data in the standard format received from the image-file processing unit 304...to form stereoscopic-image data in a format adapted to a case of performing display

on the direct-view display (DP) 102. The display control unit 303 receives stereoscopic-image data formed by the stereoscopic-image-data processing unit 306...and displays the received data..."), where it is described that the synthesis unit 306 synthesizes the 2D data and then converts the data into three-dimensional, or stereoscopic image data, therefore it would have been obvious to one of ordinary skill in the art to convert any image data of a 2D application window, as illustrated by Osaka et al. in Figure 34, and convert them into stereoscopic windows, as illustrated in Figure 45. Osaka et al. and Iizuka et al. fail to teach a first synthesis unit that synthesizes a three-dimensional image generated by a 2D/3D conversion unit and a three-dimensional image included in multimedia information. Akamatsu et al. teaches a first synthesis unit that synthesizes a three-dimensional image generated by a 2D/3D conversion unit and a three-dimensional image included in said multimedia information in column 5 lines 4-11 ("...a first image signal is input to an input terminal 11, while a second image signal is input to a second input terminal 12...The output terminal of the parallax control circuit 103 is connected to the three-dimensional image synthesizer 103."), where it is described that the synthesis unit synthesizes two three-dimensional images, therefore one of ordinary skill in the art would be capable of inputting the three-dimensional image generated by Iizuka et al. and the multimedia file containing three-dimensional image data as taught Osaka et al., and synthesize the two three dimensional images. It would have been obvious to one of ordinary skill in the art to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. because this combination would provide realistic two-dimensional window images represented in three dimensions stereoscopically thereby enabling accurate depth perception of any two-dimensional window or page in a three-dimensional environment.

Regarding claim 13, Osaka et al. fails to teach the limitations. Iizuka et al. teaches a 2D/3D conversion unit converting said page image into a three-dimensional image in column 21 lines 58-61 ("The display control unit 303 receives stereoscopic-image data formed by the stereoscopic-image-data processing unit 306...and displays the received data..."), where it is described that the synthesis unit 306 synthesizes the 2D data and then converts the data into three-dimensional, or stereoscopic image data. The motivation to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. is equivalent to the motivation of claim 12.

Regarding claim 14, Osaka et al. illustrates a second font image, which is an image that displays two-dimensional character information in Figure 44 as element 1034b. Osaka et al. and Iizuka et al. fail to teach a first font image that displays character information three-dimensionally. Akamatsu et al. teaches a first font image, which is an image that displays character information three-dimensionally, in column 3 lines 38-41 ("...a stereoscopically displayed character, numerical value, sign, etc. such as a channel number, a program name, an operation name...") and in column 6 lines 33-38 ("...numbers for selecting channels, a character for adjusting the volume, a character for adjusting the color, a character for adjusting the brightness, and a character for selecting channels by up/down selection adjustment are appearing as stereoscopic images..."). The motivation to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. is equivalent to the motivation of claim 12.

Regarding claim 15, Osaka et al. fails to teach the limitations. Iizuka et al. teaches decoding multimedia information, or image files, to obtain image data in column 21 lines 40-43 ("The image-file processing unit 304 reads various types of image files, analyzes the contents of the read file, decodes compressed data if necessary, and converts the data into image data having

a predetermined standard format."), where it described that the image data representing the two-dimensional left and right images is decoded, therefore it would have been obvious for one of ordinary skill in the art to decode any image data, including 2D window data as illustrated by Osaka et al. in Figure 45 as element 1033a, in order to utilize the data for further stereoscopic image processing. The motivation to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. is equivalent to the motivation of claim 12.

Regarding claim 16, Osaka et al. fails to teach the limitations. Iizuka et al. teaches a 2D/3D conversion unit converting said page image into a three-dimensional image in column 21 lines 58-61 ("The display control unit 303 receives stereoscopic-image data formed by the stereoscopic-image-data processing unit 306...and displays the received data..."), where it is described that the synthesis unit 306 synthesizes the 2D data and then converts the two-dimensional, or second font image data, into three-dimensional, or stereoscopic image data. The motivation to combine the teachings of Osaka et al., Iizuka et al. and Akamatsu et al. is equivalent to the motivation of claim 12.

Regarding claim 19, Osaka et al. teaches that the first font image, or three-dimensional image which was generated through synthesis of the two-dimensional images, comprise a plurality of pieces of light/dark information and arranged so that apparent charter thickness is thin in column 27 lines 62-65 ("...the number of parallax images) reduces the aperture efficiency of the parallax barrier pattern, resulting in a darker observed image."), and as illustrated in Figures 24A, 24B, 51A-51C and 52A, where it is shown that the character thickness is thin so the pieces may be synthesized for stereoscopic viewing.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Said Broome whose telephone number is (571)272-2931. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ulka Chauhan can be reached on (571)272-7782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Broome
5/24/06 SB

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